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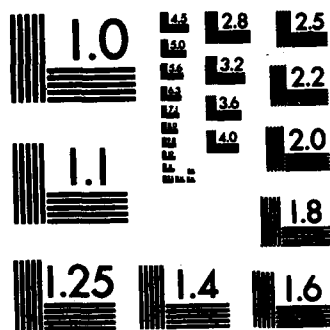
193088 MLRS MISSILE NUMBERS BC-147 BC-143 BC-135 ROUND
NUMBERS V-357/PQ-8. (U) ARMY ELECTRONICS RESEARCH AND
DEVELOPMENT COMMAND WSMR NM ATM. D C KELLER NOV 82
ERADCOM/ASL/DR-1271 F/G 4/2

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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

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SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

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19. KEY WORDS (Continue on reverse side if necessary and identify by block number)		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of the 19308B MLRS, Missile Numbers BC-147, BC-143, BC-135, Round Numbers V-357/PQ-88, V-358/PQ-39, V-359/PQ-90 are presented in tabular form. ←		

CONTENTS

PAGE

INTRODUCTION-----	1
DISCUSSION-----	2
GENERAL AREA MAP-----	2
LAUNCH AREA DIAGRAM-----	3

TABLES:

1. Surface Observation taken at 0330 MST at Brillo-----	4
2. Anemometer Measured Wind Data at 30 FT. AGL-----	5
3. Anemometer Measured Wind Data at 60 FT. AGL-----	6
4. Anemometer Measured Wind Data at 90 FT. AGL-----	7
5. T-Time Pilot-Balloon Measured Wind Data-----	8
6. Aiming and T-Time Computer Met Messages-----	9
7. E-23 Significant Level Data at 0500 MST-----	10
8. E-23 Upper Air Data at 0500 MST-----	12
9. E-23 Mandatory Levels at 0500 MST-----	16
10. E-23 Significant Level Data at 0700 MST-----	17
11. E-23 Upper Air Data at 0700 MST-----	18
12. E-23 Mandatory Levels at 0700 MST-----	20
13. NW-30 Significant Level Data at 0830 MST-----	21
14. NW-30 Upper Air Data at 0830 MST-----	23
15. NW-30 Mandatory Levels at 0830 MST-----	28



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INTRODUCTION

103038 MLRS, Missile Numbers BC-147, BC-143 and BC-135, Round Numbers V-357/PQ-88, V-358/PQ-89 and V-359/PQ-90, were launched from BRILLO, White Sands Missile Range (WSMR), New Mexico, at 0830:01, 0830:05 and 0830:10, MST, 02 Nov 82. The scheduled launch times were 0800, 0800:04.5 and 0800:09 MST.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature ($^{\circ}\text{C}$), relative humidity, dew point ($^{\circ}\text{C}$), density (gm/m^3), wind direction and speed, and cloud cover were made at the BRILLO Net Site at T-0 minutes.

(2) Anemometer data were provided from existing tower-mounted anemometer at BRILLO. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

b. Upper Air

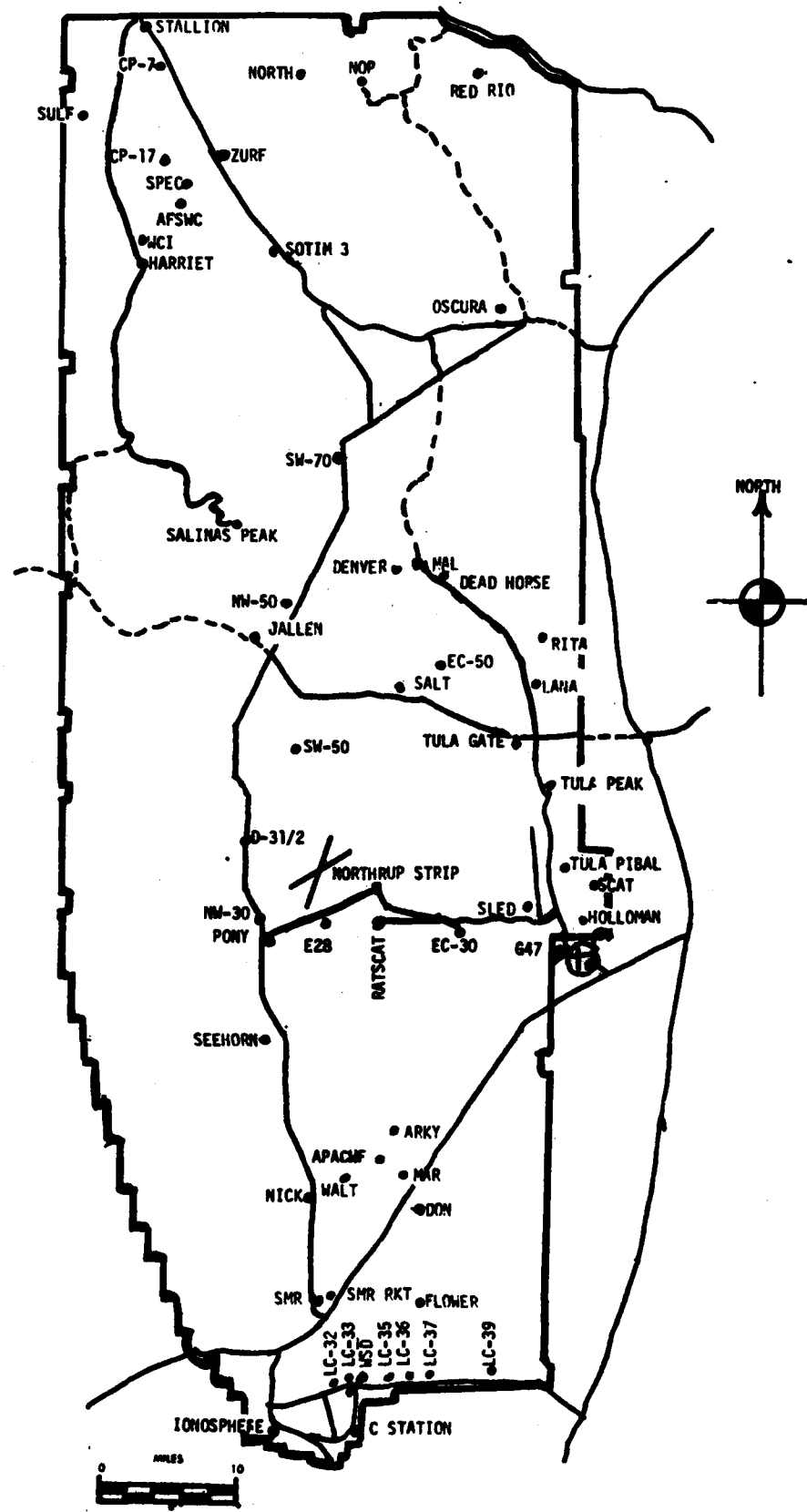
(1) Low level wind data were obtained from pilot-balloon observations at:

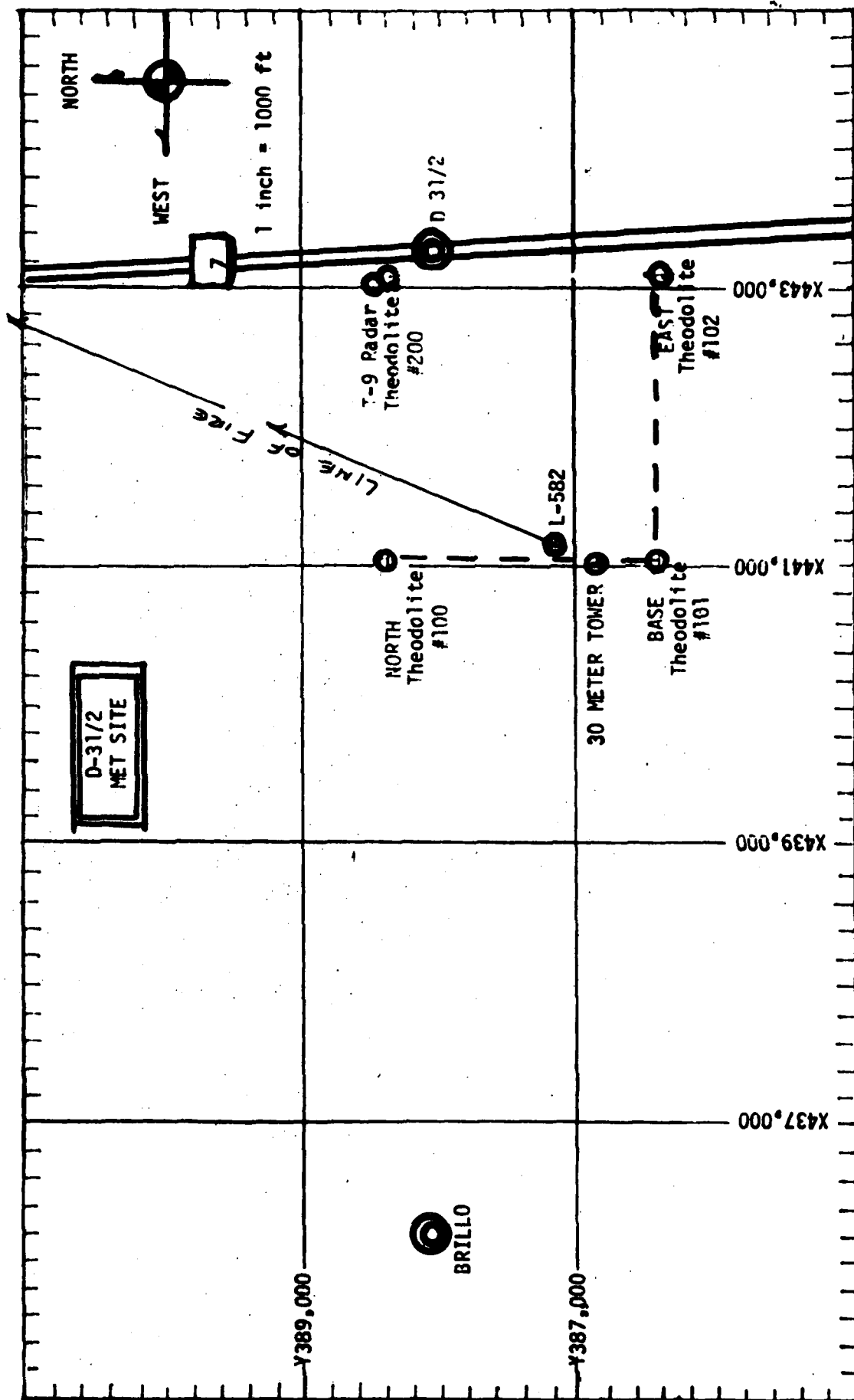
SITE AND ALTITUDE	
D 3 1/2	1350 meters
DEADMORSE	2000 meters

(2) Air structure data (rawinsonde) were collected at the following Net Sites.

SITE AND TIME	
E-28	0500 MST
E-28	0700 MST
MI-30	0800 MST

WSMR METEOROLOGICAL SITES





PROJECT SURFACE OBSERVATION

TABLE <u>1</u>		STATION <u>BRILLO</u>							
DATE <u>2</u> <u>NOV</u> <u>82</u>		X= <u>441,121.6</u> Y= <u>387,107.8</u> H= <u>4005.2</u>							
DAY		YEAR							
TIME M S T	PRESSURE mbs	TEMPERATURE OF OC	DEW POINT OF OC	RELATIVE HUMIDITY %	DENSITY gm/m ³	WIND DIRECTION degs in	SPEED kts	CHARACTER kts	VISIBIL- ITY
0830	878.3	12.7	-3.8	32	1069	020	06		50

OBSTRUCTIONS TO VISIBILITY	CLOUDS						REMARKS			
	1st LAYER		2nd LAYER		3rd LAYER					
	AMT	TYPE	HGT	AMT	TYPE	HGT				
	2	SC	6500	5	AC	12000	2	CI	24000	

PSYCHROMETRIC COMPUTATION

TIME: MST	0830	
DRY BULB TEMP.	12.7	
WET BULB TEMP.	5.5	
WET BULB DEPR.	7.2	
DEW POINT	-3.8	
RELATIVE HUMID.	32	

TABLE 2

Anemometer Data - 30 FT. Level of 30 Meter Tower

X= 441,018.71 Y= 386,849.19 H= 4,004.80 (BASE)

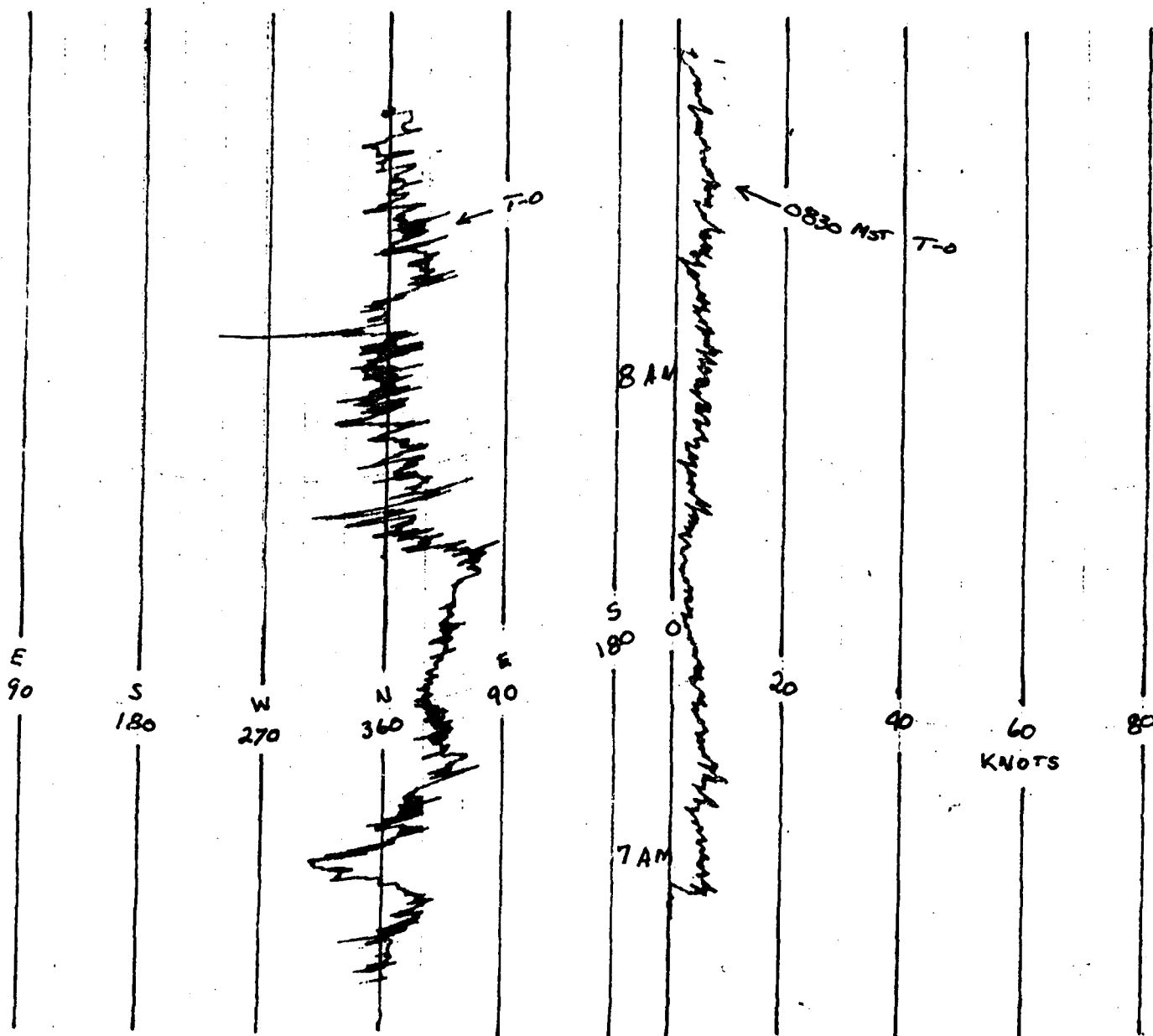


TABLE 3

Anemometer Data = 60 FT. Level of 30 Meter tower

X= 441,018.71 Y= 386,849.19 H= 4,004.80 (BASE)

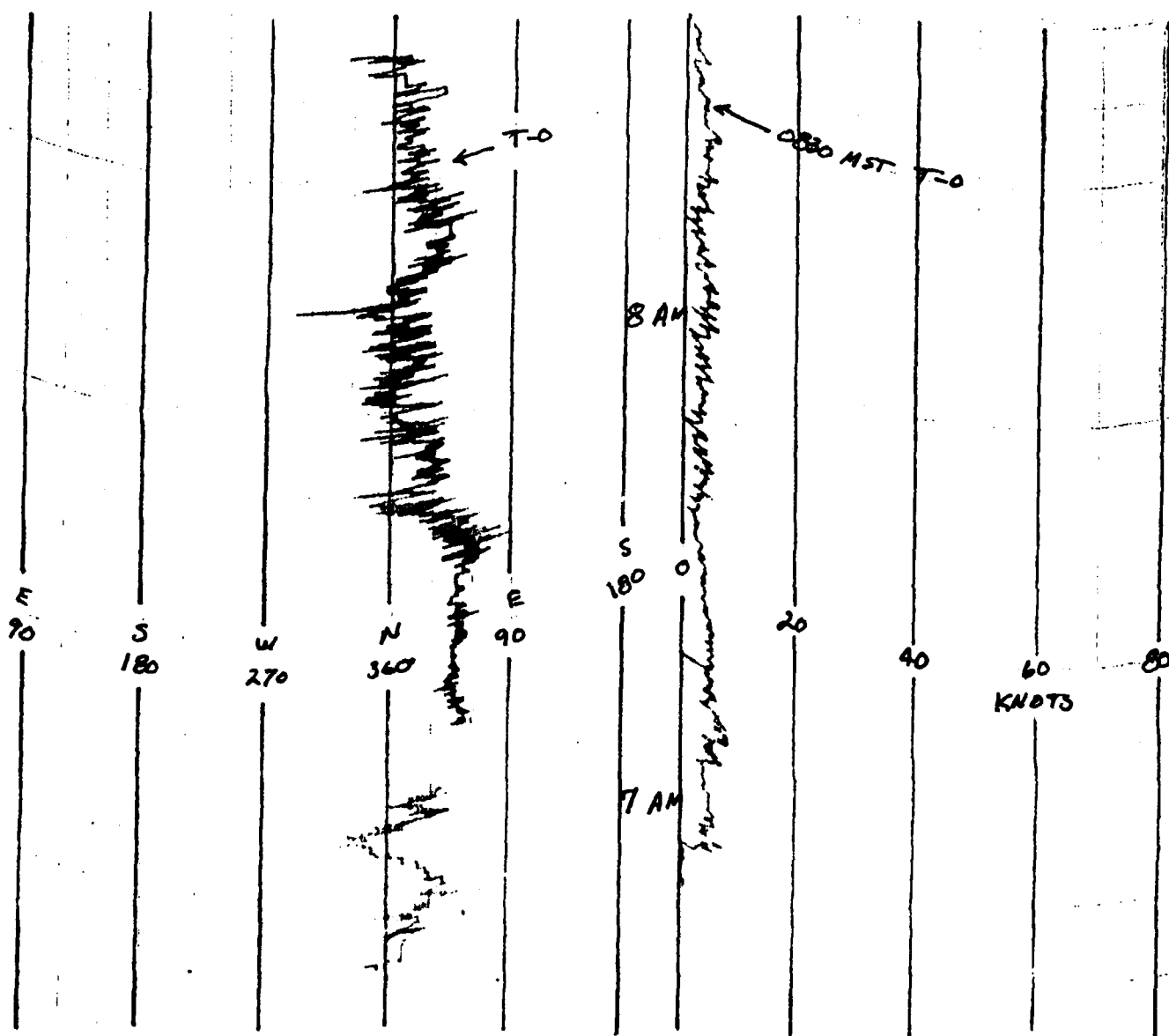
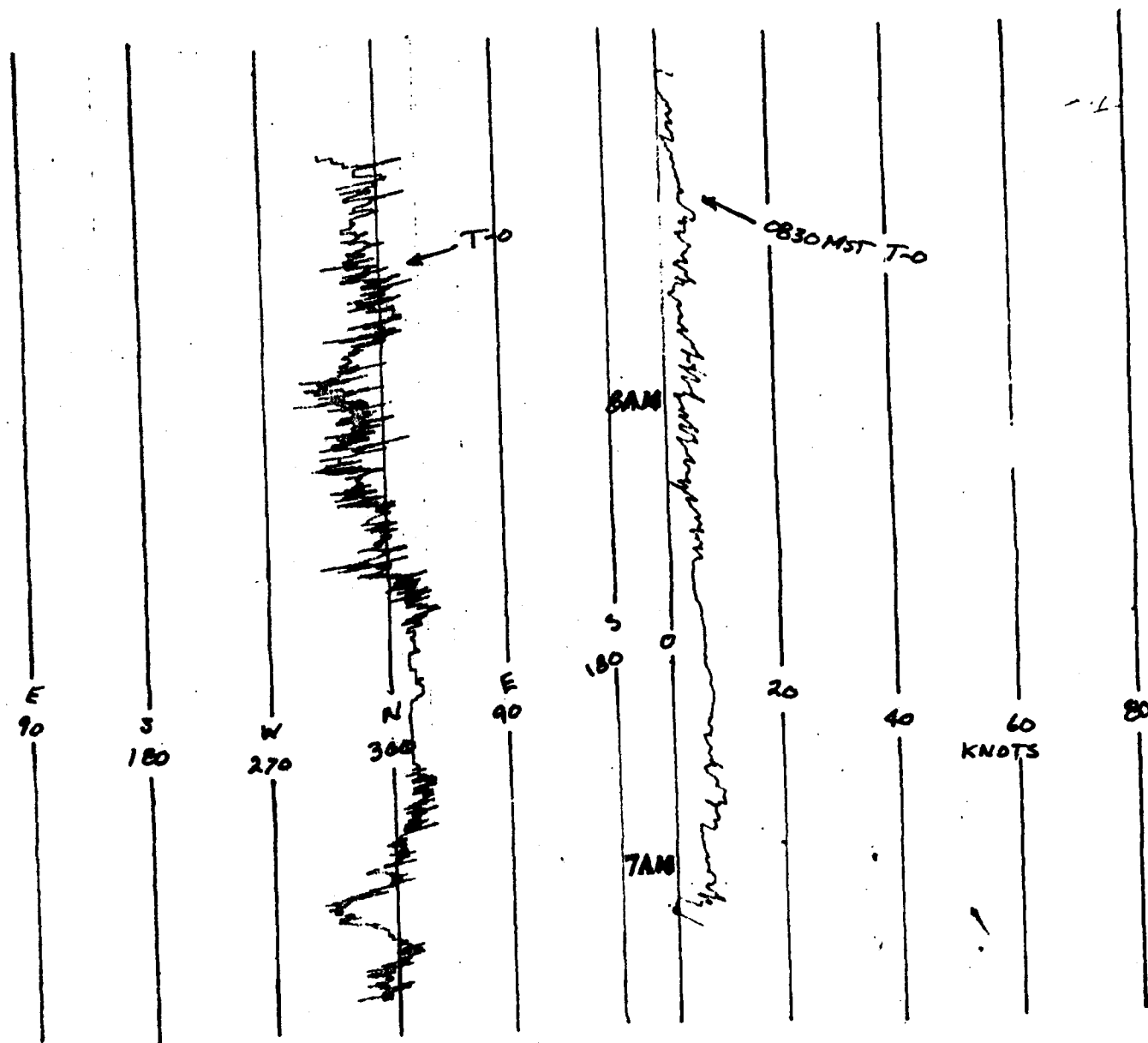


TABLE . 4

Anemometer Data - 90 FT Level of 30 Meter Tower

X= 441,018.71 Y= 336,849.19 H= 4,604.80 (BASE)



T-TIME PILOT-BALLOON MEASURED WIND DATA

DATE 02 November 1982

SITE: D 3 1/2

TIME: 0830 MST

WSTM COORDINATES:

X= 441,053.12

Y= 386,316.94

H= 4,008.31

SITE: DEADMORSE

TIME 0830 MST

WSTM COORDINATES:

X= 519,982.11

Y= 490,249.23

H= 4,113.72

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	020	06
150	016	07
210	014	03
270	013	09
330	011	11
390	009	12
500	007	14
650	013	15
800	029	16
950	034	16
1150	041	20
1350	043	18
1550		
1750		
2000		

Data obtained from a double Theodolite
Tracked pilot-balloon observation.

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	020	10
150	002	16
210	360	13
270	002	19
330	003	20
390	005	20
500	009	21
650	016	21
800	017	18
950	012	15
1150	007	14
1350	013	12
1550	026	11
1750	029	10
2000	026	07

Data obtained from a single Theodolite
Tracked pilot-balloon observation.

TABLE 6

AIMING AND T-TIME COMPUTER NET MESSAGES

02 November 1962

E-23 0500 MST

NETCM1329064

021200119378

00537004 27940378

01001512 28540367

02006015 28600342

03019016 23360302

04012004 23040755

05495006 27670710

06454012 27270663

07463019 26330627

08466024 26430568

09437026 26140551

10435029 25720516

11470029 25280483

12443031 24690436

13460035 24030379

14470038 23630329

15493050 23670285

16515057 23570246

17503053 23000213

18510049 22310133

19527039 21660157

20492034 21020134

21514029 20540114

22467027 20410096

23502022 20580082

24553013 21030069

25453003 21020059

26433014 21330050

E-23 0700 MST

NETCM1329064

021400119379

00537004 23050379

01010021 23340363

02640022 23440342

03037013 23320303

04054011 27950756

05431002 27610711

06446003 27250663

07462015 26350627

08465025 26430533

09454024 26070551

10462024 25650516

11464027 25430433

12456034 24630436

13475036 23940379

14503044 23300328

FBI-30 0830 MST

NETCM1329065

021550122379

00030010 23420379

01617013 23470363

02624016 23400343

03023015 23210303

04077009 27930756

05236005 27560711

06409010 27160663

07464011 26740627

08472021 26330533

09453027 26000551

10457031 25590516

11465027 25130432

12453035 24550435

13490040 23970373

14515046 23330323

15503053 23330234

16522067 23530246

17500053 23040213

18509051 22390183

19509043 21770157

20496041 21120134

21501041 20710114

22436022 20630097

23536021 20930032

24567009 20930070

25371003 21110059

26453002 21310051

GEOMETRIC COORDINATES
32.89927 LAT DEG
136.40591 LON DEG

SIGNIFICANT LEVEL DATA
3060290140
EAST-28/CHLHRY
TABLE 7

STATION ALTITUDE 3912.75 FEET MSL
2 NOV. 82 0500 HRS MST
ASCENSION NO. 140

PRESSURE MILLIBARS	BAROMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE	
877.5	3912.7	5.4	-2.4	57.0
876.4	3946.5	7.3	-2.2	51.0
860.6	4150.9	12.1	-3.3	34.0
866.2	4266.9	13.4	-3.8	30.0
850.0	4787.6	12.8	-6.7	25.0
770.3	7477.7	7.9	-5.2	39.0
718.7	9342.7	3.7	-5.0	53.0
705.5	9836.5	2.7	-11.2	35.0
700.0	10044.5	2.2	-6.4	53.0
678.7	10862.5	.5	-6.1	61.0
656.6	11731.3	-2.6	-6.6	74.0
612.9	13514.9	-6.5	-17.0	43.0
550.9	16228.1	-11.7	-27.7	25.0
500.0	18639.8	-18.2	-27.4	44.0
493.0	18985.3	-19.4	-26.9	51.0
490.5	19109.5	-19.9	-26.8	54.0
484.8	19394.6	-20.3	-23.7	74.0
454.0	20983.2	-23.8	-29.2	61.0
451.8	21099.8	-24.2	-30.1	58.0
439.6	21754.9	-25.6	-28.1	79.0
432.4	22147.7	-27.1	-28.5	88.0
417.8	22959.9	-28.6	-34.1	59.0
400.0	23979.2	-31.9	-37.0	60.0
395.1	24269.1	-26.4	-31.3	63.0
381.4	25095.1	-34.3	-41.0	50.0
376.4	25399.3	-33.6	-44.2	33.0
356.6	26644.8	-34.5	-48.2	23.0
321.1	29040.2	-37.9	-52.0	21.0
300.0	30581.0	-38.2	-52.2	21.0
277.4	32366.6	-35.3	-50.1	20.0
261.0	33764.4	-35.4	-50.2	20.0
250.0	34748.6	-37.0	-51.6	20.0
218.9	37746.6	-41.5		
200.0	39743.3	-46.5		
150.0	45872.7	-58.4		
116.5	50992.0	-68.5		
109.5	52217.9	-68.3		
107.8	52528.5	-67.1		
100.0	54017.8	-68.0		
95.9	54842.4	-69.9		

STATION ALTITUDE 3912.75 FEET MSL
 2 NOV. 62 0500 HRS MST
 ASCENSION NO. 140

SIGNIFICANT LEVEL DATA
 3060290140
 EAST-28/CHERRY
 TABLE 7 Cont'd

GEODETIC COORDINATES
 32.89927 LAT DEG
 136.40591 LON DEG

PRESSURE	GEOMETRIC ALTITUDE	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
86.1	56967.5	-68.5	
76.7	59267.7	-66.2	
70.0	61115.9	-61.9	
56.7	65406.4	-63.4	
50.0	67982.3	-59.5	
45.9	69758.4	-57.8	

STATION ALTITUDE 3912.75 FEET MSL
2 NOV. 82 0500 HRS MST
ASCENSION NO. 140

UPPER AIR DATA
3060290140
EAST-20/CHERRY
TABLE 3

GEODETLIC COORDINATES
32.6927 LAT DEG
136.40591 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
3912.7	877.5	5.4	-2.4	57.0	1095.0	650.9	330.0	4.1	1.000269
4000.0	874.7	8.5	-2.2	46.7	1079.4	654.6	335.6	4.5	1.000265
4500.0	858.9	13.1	-5.1	27.8	1043.2	659.8	354.2	7.1	1.000252
5000.0	843.4	12.4	-6.5	26.1	1027.2	658.9	2.4	10.0	1.000246
5500.0	828.1	11.5	-6.0	28.7	1011.7	657.9	6.9	13.1	1.000244
6000.0	813.1	10.6	-5.7	31.3	996.4	656.8	8.8	14.1	1.000241
6500.0	790.4	9.7	-5.4	33.9	981.5	655.8	10.2	14.1	1.000238
7000.0	783.9	8.8	-5.3	36.5	966.7	654.8	9.4	11.1	1.000235
7500.0	769.7	7.8	-5.2	39.2	952.2	653.7	7.5	7.7	1.000232
8000.0	755.5	6.7	-5.0	42.9	938.4	652.4	3.1	4.1	1.000229
8500.0	741.6	5.6	-4.9	46.7	924.8	651.1	328.4	1.5	1.000227
9000.0	727.9	4.5	-4.9	50.4	911.4	649.8	292.0	3.1	1.000224
9500.0	714.5	3.4	-6.8	47.3	898.3	648.5	280.9	5.2	1.000218
10000.0	701.2	2.3	-7.2	49.2	885.1	647.2	274.9	7.5	1.000215
10500.0	688.1	1.3	-6.2	57.5	871.7	646.0	270.1	9.6	1.000214
11000.0	675.2	.0	-6.2	63.1	859.2	644.6	262.9	11.1	1.000211
11500.0	662.4	-1.8	-6.4	70.5	848.5	642.5	258.7	12.7	1.000209
12000.0	649.8	-3.2	-8.0	69.3	836.9	640.7	257.6	14.4	1.000204
12500.0	637.4	-4.3	-10.7	60.6	824.5	639.3	258.5	16.3	1.000198
13000.0	625.2	-5.4	-13.7	51.9	812.3	637.9	261.0	18.5	1.000192
13500.0	613.3	-6.5	-16.9	43.3	800.3	636.5	261.8	20.6	1.000187
14000.0	601.3	-7.4	-18.7	39.8	787.7	635.3	261.9	22.6	1.000183
14500.0	589.6	-8.4	-20.6	36.5	775.2	634.1	262.8	23.4	1.000179
15000.0	578.1	-9.3	-22.5	33.1	763.0	633.0	264.2	24.0	1.000175
15500.0	566.9	-10.3	-24.6	29.8	750.9	631.8	269.3	24.5	1.000172
16000.0	555.9	-11.3	-26.7	26.5	739.1	630.6	273.7	25.4	1.000168
16500.0	544.9	-12.4	-27.4	27.1	727.8	629.2	274.7	26.9	1.000166
17000.0	534.1	-13.8	-27.2	31.1	717.0	627.6	275.0	28.2	1.000163
17500.0	523.4	-15.1	-27.1	35.0	706.4	625.9	273.7	28.6	1.000161
18000.0	513.0	-16.5	-27.2	39.0	696.0	624.3	272.6	28.8	1.000159
18500.0	502.8	-17.8	-27.3	42.9	685.7	622.7	272.0	28.5	1.000156
19000.0	492.7	-19.5	-26.9	51.4	676.2	620.7	269.0	27.8	1.000155
19500.0	482.7	-20.5	-24.1	73.1	665.2	619.4	262.7	26.8	1.000153
20000.0	472.8	-21.6	-25.8	69.0	654.5	618.0	256.5	27.0	1.000150
20500.0	463.2	-22.7	-27.5	65.0	644.0	616.6	250.9	28.2	1.000147
21000.0	453.7	-23.9	-29.3	60.6	633.7	615.2	249.4	30.0	1.000144
21500.0	444.3	-25.1	-28.8	70.8	623.6	613.8	249.5	32.0	1.000142
22000.0	435.1	-26.5	-28.3	84.6	614.3	611.9	249.4	32.3	1.000140
22500.0	426.0	-27.8	-30.7	75.4	604.5	610.4	249.4	32.6	1.000138
23000.0	417.1	-28.7	-34.2	59.0	594.3	609.2	250.1	33.0	1.000134

STATION ALTITUDE 3912.75 FEET MSL
2 NOV. 62 0500 HRS MST
ASCENSION NO. 140

UPPER AIR DATA
3060290140
EAST-28/CHLRY
TABLE 3 Cont'd

GEODETIC COORDINATES
32-69927 LAT DEG
136-40591 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INEX OF REFRACTION
						DIRECTION DEGREES (TN)	SPEED KNOTS	
23500.0	408.3	-30.3	59.5	585.6	607.1	251.2	33.4	1.000132
24000.0	399.6	-31.5	60.2	576.0	605.7	253.1	33.7	1.000130
24500.0	391.2	-28.6	59.4	557.1	609.3	255.8	34.0	1.000126
25000.0	383.0	-33.4	51.5	556.3	603.3	259.3	34.5	1.000125
25500.0	374.8	-33.7	32.2	545.1	602.9	261.1	35.0	1.000122
26000.0	366.7	-34.0	28.2	534.2	602.4	262.1	35.5	1.000120
26500.0	358.8	-34.4	24.2	523.5	602.0	263.6	38.6	1.000117
27000.0	351.1	-35.0	22.7	513.6	601.2	265.1	41.3	1.000115
27500.0	343.5	-35.7	22.3	503.9	600.3	268.0	39.5	1.000113
28000.0	336.1	-36.4	21.9	494.5	599.4	270.8	37.8	1.000111
28500.0	328.8	-37.1	21.5	485.3	598.5	271.2	35.1	1.000108
29000.0	321.7	-37.8	21.0	476.2	597.0	271.2	33.2	1.000106
29500.0	314.7	-38.0	21.0	466.1	597.4	268.6	37.0	1.000104
30000.0	307.8	-38.1	21.0	456.1	597.3	269.4	40.8	1.000102
30500.0	301.1	-38.2	21.0	446.4	597.2	274.3	45.0	1.000100
31000.0	294.5	-37.5	20.8	435.4	598.0	278.0	48.6	1.000097
31500.0	288.1	-36.7	20.5	424.5	599.1	280.9	51.6	1.000095
32000.0	281.9	-35.9	20.2	413.9	600.1	281.9	52.5	1.000093
32500.0	275.8	-35.3	20.0	403.9	600.8	282.3	52.8	1.000090
33000.0	269.8	-35.3	20.0	395.3	600.8	283.3	54.8	1.000088
33500.0	264.0	-35.4	20.0	386.8	600.7	284.4	56.9	1.000087
34000.0	258.3	-35.8	20.0	379.1	600.2	285.7	57.3	1.000085
34500.0	252.7	-36.6	20.0	372.2	599.2	287.1	57.7	1.000083
35000.0	247.2	-37.4	18.3**	365.3	598.2	289.5	57.2	1.000082
35500.0	241.8	-38.1	15.0**	358.4	597.3	291.7	56.8	1.000080
36000.0	236.5	-38.9	11.7**	351.7	596.3	292.8	55.8	1.000078
36500.0	231.3	-39.6	8.3**	345.1	595.3	292.9	54.7	1.000077
37000.0	226.3	-40.4	5.0**	338.6	594.4	290.7	53.5	1.000075
37500.0	221.3	-41.1	1.6**	332.3	593.4	287.3	52.7	1.000074
38000.0	216.4	-42.1		326.3	592.1	282.2	52.7	1.000073
38500.0	211.6	-43.4		320.8	590.5	280.4	52.6	1.000071
39000.0	206.8	-44.6		315.3	588.9	280.8	52.3	1.000070
39500.0	202.2	-45.9		310.0	587.3	283.5	51.8	1.000069
40000.0	197.6	-47.0		304.4	585.9	286.7	51.5	1.000068
40500.0	193.6	-48.0		298.6	584.6	286.9	51.2	1.000067
41000.0	188.5	-48.9		292.9	583.3	287.2	50.7	1.000065
41500.0	184.2	-49.9		287.4	582.1	288.2	49.5	1.000064
42000.0	179.9	-50.9		282.0	580.8	289.4	48.2	1.000063
42500.0	175.7	-51.9		276.6	579.5	290.8	46.4	1.000062
43000.0	171.7	-52.8		271.4	578.3	292.4	45.1	1.000060

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3912.75 FEET MSL
2 NOV. 82 0500 HRS MST
ASCENSION NO. 140

UPPER AIR DATA
3060290140
EAST-28/CHERRY
TALRE 3 Cont'd

GEODETIC COORDINATES
32.09927 LAT DEG
136.40591 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND M/SEC	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
43500.0	167.7	-53.8		260.3	577.0	294.1	44.3	1.000059
44000.0	163.8	-54.8		261.3	575.7	295.6	44.1	1.000058
44500.0	160.0	-55.7		256.3	574.4	296.6	44.9	1.000057
45000.0	156.3	-56.7		251.5	573.2	296.8	45.3	1.000056
45500.0	152.6	-57.7		246.8	571.9	294.4	44.5	1.000055
46000.0	149.1	-58.7		242.1	570.6	291.7	43.2	1.000054
46500.0	145.4	-59.6		237.3	569.3	287.8	39.3	1.000053
47000.0	141.9	-60.6		232.6	567.9	283.2	35.6	1.000052
47500.0	138.4	-61.6		228.0	566.6	280.3	31.0	1.000051
48000.0	135.0	-62.6		223.4	565.3	276.5	26.8	1.000050
48500.0	131.8	-63.6		219.0	564.0	273.7	26.9	1.000049
49000.0	128.5	-64.6		214.7	562.6	270.9	27.1	1.000048
49500.0	125.4	-65.6		210.4	561.3	271.5	29.7	1.000047
50000.0	122.3	-66.5		206.3	560.0	272.0	32.4	1.000046
50500.0	119.4	-67.5		202.2	558.6	273.9	32.7	1.000045
51000.0	116.5	-68.5		198.2	557.3	276.1	32.6	1.000044
51500.0	113.5	-68.4		193.2	557.4	283.6	31.0	1.000043
52000.0	110.7	-68.3		188.3	557.5	294.5	29.6	1.000042
52500.0	108.0	-67.2		182.6	559.1	296.9	27.3	1.000041
53000.0	105.3	-67.6		178.4	558.5	292.3	24.1	1.000040
53500.0	102.6	-68.2		174.5	557.7	282.6	22.2	1.000039
54000.0	100.1	-68.8		170.6	556.9	269.6	22.0	1.000038
54500.0	97.6	-69.4		166.9	556.0	263.4	21.0	1.000037
55000.0	95.1	-69.8		163.0	553.5	261.2	18.9	1.000036
55500.0	92.8	-69.5		158.6	556.0	261.0	18.9	1.000035
56000.0	90.4	-69.1		154.4	556.4	261.9	20.0	1.000034
56500.0	88.2	-68.8		150.3	556.9	266.1	21.3	1.000033
57000.0	86.0	-68.5		146.3	557.4	273.6	22.9	1.000033
57500.0	83.8	-68.0		142.3	558.0	279.3	24.8	1.000032
58000.0	81.7	-67.5		138.5	558.7	280.7	26.4	1.000031
58500.0	79.7	-67.0		134.7	559.4	282.0	27.9	1.000030
59000.0	77.7	-66.5		131.0	560.1	286.2	27.4	1.000029
59500.0	75.8	-65.7		127.3	561.2	291.0	26.9	1.000028
60000.0	74.0	-64.5		123.5	562.7	296.9	25.4	1.000028
60500.0	72.2	-63.3		119.8	564.3	304.3	23.7	1.000027
61000.0	70.4	-62.2		116.2	565.9	309.9	21.8	1.000026
61500.0	68.7	-62.0		113.3	566.1	314.1	19.6	1.000025
62000.0	67.0	-62.2		110.7	565.8	322.4	15.1	1.000025
62500.0	65.4	-62.4		108.1	565.6	353.0	8.4	1.000024
63000.0	63.8	-62.6		105.6	565.3	44.8	7.1	1.000023

STATION ALTITUDE 3912.75 FEET MSL
2 NOV. 32
ASCENSION NO. 140

UPPER AIR DATA
3060290140
EAST-28/CHEERY

GEOMETRIC COORDINATES
32.8927 LAT DEG
136.40591 LON DEG

TABLE 3 Cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES (TN)	SPEED KNOTS	
63500.0	62.3	-62.7		103.1	565.1	55.3	5.1	1.000023
64000.0	60.8	-62.9		100.7	564.9	73.4	3.1	1.000022
64500.0	59.3	-63.1		98.3	564.6	262.7	2.8	1.000022
65000.0	57.8	-63.3		96.0	564.4	259.4	8.7	1.000021
65500.0	56.4	-63.3		93.7	564.4	253.5	11.9	1.000021
66000.0	55.1	-62.5		91.1	565.4	249.8	15.0	1.000020
66500.0	53.8	-61.7		88.6	566.4	251.8	14.5	1.000020
67000.0	52.5	-61.0		86.1	567.5	255.7	13.1	1.000019
67500.0	51.2	-60.2		83.8	568.5	268.4	12.5	1.000019
68000.0	50.0	-59.5		81.5	569.5	285.3	13.2	1.000018
68500.0	48.8	-59.0		79.3	570.1			1.000018
69000.0	47.6	-58.5		77.3	570.7			1.000017
69500.0	46.5	-58.0		75.3	571.4			1.000017

STATION ALTITUDE 3912.75 FEET MSL
2 NOV. 82
ASCENSION NO. 140

MANDATORY LEVELS
3060290140
EAST-28/CHERRY
TABLE 9

GEODETIC COORDINATES
32.69927 LAT DEG
136.440591 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE		DIRECTION DEGREES (TN)	SPEED KNOTS
850.0	4724.	12.8	-6.7	25.	359.6	8.7
800.0	6444.	9.8	-5.5	34.	10.0	14.1
750.0	8192.	6.3	-4.9	44.	358.4	2.8
700.0	10035.	2.2	-6.4	53.	274.6	7.7
650.0	11982.	-3.2	-7.9	69.	257.7	14.4
600.0	14045.	-7.5	-18.9	39.	261.9	22.8
550.0	16249.	-11.8	-27.7	25.	274.2	26.2
500.0	18615.	-18.2	-27.4	44.	271.8	28.5
450.0	21164.	-24.4	-29.7	61.	249.4	30.7
400.0	23941.	-31.9	-37.0	60.	253.0	33.6
350.0	27027.	-35.1	-48.9	23.	265.4	41.1
300.0	30522.	-38.2	-52.2	21.	274.9	45.6
250.0	34675.	-37.0	-51.6	20.	268.2	57.5
200.0	39650.	-46.5			284.9	51.7
175.0	42523.	-52.0			291.2	46.1
150.0	45751.	-58.4			292.6	43.9
125.0	49450.	-65.7			271.6	30.0
100.0	53854.	-68.8			269.8	22.0
80.0	58237.	-67.0			281.8	27.6
70.0	60910.	-61.9			310.6	21.4
60.0	64031.	-63.0			45.3	4.4
50.0	67730.	-59.5			283.7	13.1

GEODETIC COORDINATES
32.89927 LAT DEG
136.40591 LON DEG

SIGNIFICANT LEVEL DATA
3060290141
EAST-20/CHERRY

TABLE 10

STATION ALTITUDE 3912.75 FEET MSL
2 NOV. 82 0700 HRS MST
ASCENSION NO. 141

PRESSURE	GEOMETRIC ALTITUDE	TEMPERATURE AIR	DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
MILLIBARS	MSL FEET			
878.6	3912.7	6.5	-1.9	55.0
874.3	4045.7	9.6	-4.0	38.0
850.0	4415.5	10.9	-4.7	33.0
808.4	6187.3	10.2	-7.9	27.0
734.0	8795.2	4.0	-6.0	48.0
714.2	9524.1	2.5	-5.1	57.0
700.0	10057.1	1.8	-10.0	41.0
618.1	13308.8	-5.9	-12.4	60.0
606.2	13809.1	-6.4	-18.3	38.0
540.4	16721.1	-13.8	-27.6	30.0
500.0	18643.7	-18.9	-27.6	46.0
480.8	19605.4	-17.7	-23.7	59.0
461.7	20591.1	-24.1	-24.3	98.0
438.5	21823.0	-26.4	-29.1	78.0
400.0	23983.1	-32.2	-33.6	87.0
382.5	25017.0	-34.6	-36.9	79.0
373.0	25595.2	-34.7	-43.9	38.0
367.1	25962.0	-34.2	-45.9	29.0
336.6	27860.9	-34.0	-46.7	26.0
318.1	29257.2	-36.6	-49.0	26.0
300.0	30596.1	-35.7	-48.2	26.0
291.8	31230.8	-35.6	-48.1	26.0
282.2	31999.0	-34.5	-47.2	26.0

STATION ALTITUDE 3912.75 FEET MSL
 2 NOV. 82 0700 HRS MST
 ASCENSION NO. 141

UPPER AIR DATA
 3060290141
 EAST-28/CHLNRK
 TABLE 11

GEODETIC COORDINATES
 32.8927 LAT DEG
 136.40591 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION (DEGREES(TN))	SPEED KNOTS	INDEX OF REFRACTION
3912.7	878.6	6.5	-1.9	55.0	1092.0	652.2	330.0	4.1	1.000269
4000.0	875.8	8.5	-3.1	43.8	1080.8	654.5	336.2	4.5	1.000264
4500.0	859.9	10.4	-4.4	35.0	1054.5	656.6	355.3	7.7	1.000256
5000.0	844.3	10.8	-5.1	32.2	1033.9	657.1	2.8	11.2	1.000250
5500.0	829.0	10.6	-6.3	30.0	1016.2	656.8	6.7	14.9	1.000244
6000.0	814.0	10.3	-7.5	27.8	998.8	656.4	12.2	15.7	1.000239
6500.0	799.1	9.5	-7.4	29.5	983.4	655.5	22.7	13.7	1.000236
7000.0	784.4	8.3	-6.8	33.5	969.3	654.1	28.6	12.6	1.000234
7500.0	770.1	7.1	-6.4	37.6	955.5	652.8	29.8	11.8	1.000231
8000.0	755.9	5.9	-6.1	41.6	941.9	651.4	30.5	9.5	1.000229
8500.0	742.1	4.7	-6.0	45.6	928.5	650.0	31.4	6.5	1.000226
9000.0	728.4	3.6	-5.7	50.5	915.0	648.7	23.4	2.3	1.000224
9500.0	714.8	2.5	-5.2	56.7	901.3	647.0	229.9	2.4	1.000222
10000.0	701.5	1.9	-9.4	42.7	887.1	646.6	246.8	4.1	1.000213
10500.0	688.2	.8	-10.2	43.6	874.0	645.2	251.8	5.8	1.000209
11000.0	675.2	-.4	-10.5	46.5	861.2	643.9	250.9	6.8	1.000206
11500.0	662.4	-1.6	-10.8	49.4	848.5	642.4	249.7	8.1	1.000203
12000.0	649.8	-2.8	-11.2	52.4	836.1	641.0	248.6	9.9	1.000200
12500.0	637.5	-4.0	-11.6	55.3	823.9	639.6	255.9	12.8	1.000197
13000.0	625.4	-5.2	-12.1	58.2	811.9	638.2	262.3	16.3	1.000194
13500.0	613.5	-6.1	-14.4	51.6	799.3	637.0	263.8	19.7	1.000189
14000.0	601.7	-6.9	-18.9	37.5	786.5	636.0	264.2	23.0	1.000182
14500.0	589.9	-8.2	-20.5	36.1	774.9	634.4	262.7	24.5	1.000179
15000.0	578.4	-9.4	-22.1	34.7	763.5	632.9	260.3	24.9	1.000176
15500.0	567.1	-10.7	-23.7	33.4	752.3	631.3	258.2	24.6	1.000173
16000.0	556.0	-12.0	-25.3	32.0	741.2	629.8	256.1	23.8	1.000169
16500.0	545.1	-13.2	-26.9	30.6	730.3	628.2	256.1	23.3	1.000166
17000.0	534.3	-14.5	-27.4	32.3	719.5	626.6	250.9	22.9	1.000164
17500.0	523.7	-15.9	-27.3	36.5	708.7	625.0	258.3	23.2	1.000162
18000.0	513.2	-17.2	-27.3	40.6	698.1	623.4	259.7	23.7	1.000159
18500.0	502.9	-18.5	-27.5	44.8	687.7	621.8	260.7	24.7	1.000157
19000.0	492.8	-18.5	-26.1	50.8	673.7	621.9	261.4	25.9	1.000154
19500.0	482.9	-17.8	-24.1	57.6	658.4	622.7	260.7	28.2	1.000152
20000.0	473.1	-20.3	-23.6	74.6	651.2	619.7	260.1	30.5	1.000150
20500.0	463.4	-23.5	-24.1	94.4	646.2	615.8	259.0	32.3	1.000149
21000.0	453.9	-24.9	-25.9	91.4	636.4	614.1	258.1	34.0	1.000146
21500.0	444.5	-25.8	-27.8	83.2	625.6	612.9	257.2	34.1	1.000143
22000.0	435.2	-26.9	-29.4	78.7	615.3	611.5	256.3	34.2	1.000140
22500.0	426.1	-28.2	-30.5	80.8	605.7	609.8	255.5	33.9	1.000138
23000.0	417.1	-29.6	-31.5	82.9	596.3	608.1	254.6	33.5	1.000136

STATION ALTITUDE 3912.75 FEET MSL
2 NOV. 82 0700 HRS MST
ASCENSION NO. 141

UPPER AIR DATA
3060290141
EAST-28/CHLRRY
TABLE 11 Cont'd

GEODETIC COORDINATES
32.89927 LAT DEG
136.40591 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
23500.0	408.3	-30.9	85.0	587.0	600.5	254.9	33.5	1.000133
24000.0	399.7	-32.2	86.9	577.8	604.8	255.2	33.5	1.000131
24500.0	391.2	-33.4	83.0	568.2	603.3	260.3	33.9	1.000129
25000.0	382.8	-34.6	79.1	558.8	601.8	265.4	34.6	1.000126
25500.0	374.5	-34.7	44.7	547.1	601.6	271.3	36.4	1.000123
26000.0	360.5	-34.2	28.9	534.3	602.2	276.1	38.3	1.000120
26500.0	358.6	-34.1	28.2	522.7	602.3	279.0	39.9	1.000117
27000.0	350.9	-34.1	27.4	511.4	602.4	281.1	41.7	1.000115
27500.0	343.4	-34.0	26.7	500.3	602.4	281.8	43.4	1.000112
28000.0	336.0	-34.1	26.0	489.6	602.4	282.4	44.4	1.000110
28500.0	328.8	-35.1	26.0	481.1	601.1	282.9	44.5	1.000108
29000.0	321.7	-36.1	26.0	472.7	599.9	283.1	45.0	1.000106
29500.0	314.7	-36.4	26.0	463.2	599.4	283.1	46.1	1.000104
30000.0	307.9	-36.1	26.0	452.5	599.8	281.8	46.9	1.000101
30500.0	301.3	-35.8	26.0	442.1	600.3	279.4	47.5	1.000099
31000.0	294.8	-35.6	26.0	432.3	600.4			1.000097
31500.0	288.4	-35.2	26.0	422.2	601.0			1.000095

STATION ALTITUDE 3912.75 FEET MSL
2 NOV. 82 0700 HRS MST
ASCENSION NO. 141

MANDATORY LEVELS
3060290141
EAST-28/CHERRY

GEODETIC COORDINATES
32.89927 LAT DEG
136.40591 LONG DEG

TABLE 12

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE		DIRECTION DEGREES (TN)	SPEED KNOTS
850.0	4012.	10.9	-4.7	33.	0	9.9
800.0	6467.	9.5	-7.5	29.	22.0	15.8
750.0	8211.	5.4	-6.1	43.	30.8	8.2
700.0	10048.	1.8	-10.0	41.	247.8	4.3
650.0	11992.	-2.8	-11.2	52.	248.6	9.9
600.0	14057.	-7.1	-19.2	37.	264.2	23.5
550.0	16260.	-12.7	-26.1	31.	255.8	23.5
500.0	18619.	-18.9	-27.6	46.	261.0	25.0
450.0	21175.	-25.2	-26.6	88.	257.7	34.0
400.0	23945.	-32.2	-33.6	87.	255.2	33.5
350.0	27014.	-34.1	-46.4	27.	281.1	41.8
300.0	30537.	-35.7	-48.2	26.	279.0	47.6

STATION ALTITUDE 4010.40 FEET MSL
2 NOV. 82
ASCENSION: NO. 29 0830 HRS MST

SIGNIFICANT LEVEL DATA
3060220029
NW 30
TABLE 13

GEODETIC COORDINATES
32.08497 LAT DEG
106.49714 LONG DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES	DEWPOINT CENTIGRADE	
878.7	4010.4	10.5	-2.8	39.0
872.6	4201.1	11.1	-2.3	39.0
850.0	4919.5	10.7	-4.9	33.0
768.2	7668.0	6.7	-7.7	35.0
700.0	10151.0	1.1	-6.9	55.0
678.6	10969.2	-0.7	-10.3	48.0
650.2	12086.1	-3.6	-10.0	61.0
632.0	12821.1	-5.8	-7.5	88.0
613.8	13572.0	-7.7	-8.0	98.0
601.8	14076.3	-9.0	-10.8	87.0
587.2	14701.2	-9.3	-22.5	33.0
500.0	18711.4	-19.2	-26.7	51.0
487.6	19324.2	-20.7	-29.0	47.0
457.2	20877.9	-24.7	-29.2	66.0
454.9	20998.5	-25.5	-28.9	73.0
442.2	21672.9	-26.6	-27.0	96.0
400.0	24027.5	-32.6	-35.6	74.0
392.6	24459.7	-33.5	-44.4	32.0
352.8	26927.2	-33.8	-47.6	23.0
315.2	29517.4	-35.7	-49.3	23.0
306.7	30144.8	-34.6	-48.7	22.0
300.0	30652.5	-35.0	-49.1	22.0
262.8	33695.3	-34.7	-48.8	22.0
250.0	34839.0	-36.7	-50.5	22.0
225.2	37200.1	-41.1		
200.0	39836.9	-44.7		
178.2	42346.1	-51.1		
173.6	42906.3	-51.4		
150.0	45993.2	-57.3		
131.8	48655.4	-62.8		
116.6	51126.5	-66.0		
102.4	53719.6	-67.0		
100.0	54192.3	-66.8		
80.6	56613.4	-65.6		
78.8	58980.2	-63.0		
70.0	61378.6	-64.4		
50.0	68250.1	-59.7		
41.4	72155.9	-59.0		
35.4	75426.7	-55.8		
30.0	7921.5	-54.5		

GEODETIC COORDINATES
 32.88497 LAT. DEG
 106.49714 LON DEG

SIGNIFICANT LEVEL DATA
 3060220029
 NW 30

TABLE 13 Cont'd

STATION ALTITUDE 4010.40 FEET MSL
 2 NOV. 82 0830 HRS MST
 ASCENSION NO. 29

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
20.0 87570.2	-51.6	
15.0 92637.0	-51.4	

STATION ALTITUDE 4010.00 FEET MSL
2 NOV. 82 0830 HRS MST
ASCENSION NO. 29

UPPER AIR DATA
3060220029
NW 30
TABLE 14

GEODETTIC COORDINATES
32.08497 LAT DEG
106.49714 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION (IN) DEGREES	SPEED KNOTS	INDEX OF REFRACTION
4010.4	878.7	10.5	-2.8	39.0	1070.9	656.0	45.0	9.9	1.000263
4500.0	863.1	10.9	-3.3	36.5	1056.2	657.3	30.3	10.8	1.000258
5000.0	847.5	10.6	-5.0	33.1	1038.6	656.8	18.2	12.3	1.000251
5500.0	832.0	9.9	-5.5	33.4	1022.3	656.0	9.0	14.2	1.000247
6000.0	816.9	9.1	-6.0	33.8	1006.3	655.1	2.6	16.2	1.000243
6500.0	802.0	8.4	-6.5	34.2	990.5	654.3	11.6	14.5	1.000239
7000.0	787.3	7.7	-7.0	34.5	975.0	653.4	22.0	13.1	1.000235
7500.0	773.0	6.9	-7.5	34.9	959.7	652.6	31.0	10.9	1.000231
8000.0	758.7	6.0	-7.4	37.7	945.3	651.4	43.6	8.8	1.000228
8500.0	744.6	4.8	-7.1	41.7	931.5	650.1	63.9	6.3	1.000225
9000.0	730.8	3.7	-6.9	45.7	917.9	648.8	96.3	4.7	1.000223
9500.0	717.3	2.6	-6.8	49.8	904.5	647.5	139.3	4.0	1.000220
10000.0	704.0	1.4	-6.3	53.8	891.4	646.2	177.6	4.5	1.000217
10500.0	690.8	.3	-8.3	52.0	878.0	644.8	209.4	5.4	1.000212
11000.0	677.8	-8	-10.3	48.4	865.6	643.4	225.1	7.1	1.000207
11500.0	665.0	-2.1	-10.1	54.2	853.2	641.9	232.9	9.0	1.000205
12000.0	652.3	-3.4	-10.0	60.0	841.0	640.4	238.8	10.1	1.000202
12500.0	639.9	-4.8	-8.4	76.2	829.2	638.8	244.2	10.9	1.000202
13000.0	627.6	-6.3	-7.6	90.4	817.5	637.1	253.5	11.9	1.000201
13500.0	615.5	-7.5	-7.9	97.0	805.6	635.6	262.6	13.4	1.000198
14000.0	603.6	-8.8	-10.3	88.7	794.1	634.0	264.7	16.6	1.000192
14500.0	591.9	-9.2	-17.6	50.4	780.4	633.2	265.3	20.1	1.000182
15000.0	580.2	-10.0	-22.8	34.3	767.7	632.1	262.1	22.5	1.000176
15500.0	568.7	-11.3	-23.1	36.6	756.0	630.6	259.1	24.9	1.000174
16000.0	557.4	-12.5	-23.6	38.8	744.6	629.1	258.0	26.6	1.000171
16500.0	546.3	-13.7	-24.1	41.1	733.3	627.7	257.2	28.2	1.000168
17000.0	535.5	-15.0	-24.6	43.3	722.2	626.1	257.4	29.1	1.000166
17500.0	524.9	-16.2	-25.2	45.6	711.2	624.6	257.9	29.9	1.000163
18000.0	514.5	-17.4	-25.8	47.8	700.5	623.1	258.3	29.3	1.000160
18500.0	504.3	-18.7	-26.5	50.1	690.0	621.6	258.8	28.2	1.000158
19000.0	494.1	-19.9	-27.8	49.1	679.4	620.1	260.1	27.9	1.000155
19500.0	484.1	-21.2	-29.0	49.2	668.9	618.6	261.8	28.0	1.000152
20000.0	474.1	-22.4	-28.9	55.3	658.5	617.0	262.7	29.1	1.000150
20500.0	464.4	-23.7	-28.0	61.4	648.4	615.4	262.4	31.1	1.000148
21000.0	454.9	-25.5	-28.9	73.1	639.6	613.2	261.7	33.0	1.000146
21500.0	445.4	-26.3	-27.4	90.1	628.3	612.2	259.0	34.1	1.000144
22000.0	436.1	-27.4	-28.2	92.9	617.9	610.8	256.5	35.4	1.000141
22500.0	426.9	-28.7	-30.0	88.3	608.1	609.2	256.0	36.3	1.000139
23000.0	417.9	-30.0	-31.8	83.6	598.5	607.6	255.8	37.2	1.000136
23500.0	409.1	-31.3	-33.7	78.9	589.0	606.0	259.8	37.8	1.000133

STATION ALTITUDE 4010.40 FEET MSL
2 NOV. 82 0830 HRS MST
ASCENSION NO. 29

UPPER AIR DATA
3060220029
NW 30

GEODETIC COORDINATES
32.88497 LAT DEG
106.49714 LON DEG

TABLE 14. Cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
24000.0	400.5	-32.5	-35.5	74.3	579.6	604.4	264.3	38.7	1.000131
24500.0	391.9	-33.5	-44.5	31.9	569.7	603.1	268.8	39.1	1.000128
25000.0	383.5	-33.6	-45.1	30.0	557.6	603.0	273.3	39.6	1.000125
25500.0	375.3	-33.6	-45.7	28.2	545.8	603.0	276.9	40.5	1.000122
26000.0	367.3	-33.7	-46.3	26.4	534.2	602.9	280.1	41.6	1.000120
26500.0	359.4	-33.7	-47.0	24.6	522.9	602.8	282.9	42.9	1.000117
27000.0	351.7	-33.9	-47.7	23.0	511.9	602.7	285.4	44.4	1.000115
27500.0	344.1	-34.2	-48.0	23.0	501.7	602.2	287.6	45.4	1.000112
28000.0	336.7	-34.6	-48.3	23.0	491.6	601.7	289.8	46.0	1.000110
28500.0	329.5	-35.0	-48.6	23.0	481.8	601.3	290.8	46.7	1.000108
29000.0	322.4	-35.3	-49.0	23.0	472.2	600.8	290.2	47.6	1.000106
29500.0	315.4	-35.7	-49.3	23.0	462.7	600.4	289.5	48.6	1.000104
30000.0	308.6	-34.9	-48.9	22.2	451.2	601.4	288.2	50.5	1.000101
30500.0	302.0	-34.9	-49.0	22.0	441.5	601.4	287.1	52.3	1.000099
31000.0	295.5	-35.0	-49.0	22.0	432.2	601.3	286.4	53.8	1.000097
31500.0	289.1	-34.9	-49.0	22.0	422.8	601.3	285.8	55.3	1.000095
32000.0	282.9	-34.9	-49.0	22.0	413.6	601.4	285.6	56.6	1.000093
32500.0	276.8	-34.8	-48.9	22.0	404.6	601.5	285.9	57.8	1.000091
33000.0	270.9	-34.8	-48.9	22.0	395.8	601.5	285.9	59.6	1.000089
33500.0	265.0	-34.7	-48.8	22.0	387.2	601.6	286.5	62.0	1.000087
34000.0	259.3	-35.2	-49.3	22.0	379.7	600.9	286.9	64.0	1.000085
34500.0	253.7	-36.1	-50.0	22.0	372.9	599.8	287.0	65.0	1.000083
35000.0	248.2	-37.0	-51.4	20.5**	366.2	598.7	287.1	65.7	1.000082
35500.0	242.8	-37.9	-54.3	15.8**	359.6	597.5	287.4	64.8	1.000080
36000.0	237.5	-38.9	-57.9	11.2**	353.1	596.3	287.7	63.8	1.000079
36500.0	232.3	-39.8	-62.8	6.5**	346.8	595.1	288.1	63.0	1.000077
37000.0	227.2	-40.7	-72.3	1.9**	340.5	593.9	288.6	62.2	1.000076
37500.0	222.2	-41.5			334.1	592.9	288.4	61.0	1.000074
38000.0	217.2	-42.2			327.7	592.1	288.0	59.7	1.000073
38500.0	212.4	-42.9			321.3	591.2	286.8	58.6	1.000072
39000.0	207.7	-43.6			315.1	590.3	284.6	57.9	1.000070
39500.0	203.1	-44.2			309.0	589.4	282.9	57.2	1.000069
40000.0	198.5	-45.1			303.3	588.3	283.1	55.7	1.000068
40500.0	194.0	-46.4			298.0	586.6	283.4	54.3	1.000066
41000.0	189.6	-47.7			292.9	585.0	285.0	53.3	1.000065
41500.0	185.3	-48.9			287.9	583.3	286.7	52.4	1.000064
42000.0	181.1	-50.2			282.9	581.7	287.2	51.7	1.000063
42500.0	176.9	-51.2			277.7	580.4	287.6	51.0	1.000062
43000.0	172.8	-51.6			271.7	579.9	287.4	53.6	1.000061
43500.0	168.8	-52.5			266.5	578.6	287.0	56.9	1.000059

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4010.00 FEET MSL
2 NOV. 62 0836 HRS MST
ASCENSION NO. 29

UPPER AIR DATA
3060220029
NW 30

GEODETIC COORDINATES
32°08'49" LAT DEG
106°49'14" LONG DEG

TABLE 14 Cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						.. DIRECTION .. DEGREES (IN)	SPEED KNOTS	
44000.0	164.8	-53.5		261.4	577.4	286.8	57.3	1.000058
44500.0	161.0	-54.4		256.4	576.1	286.7	54.9	1.000057
45000.0	157.2	-55.4		251.5	574.9	286.5	51.9	1.000056
45500.0	153.5	-56.4		246.7	573.6	286.1	45.2	1.000055
46000.0	150.0	-57.3		242.0	572.3	285.6	38.5	1.000054
46500.0	146.4	-58.3		237.4	571.0	284.6	38.0	1.000053
47000.0	142.8	-59.4		232.8	569.6	284.1	39.0	1.000052
47500.0	139.4	-60.4		228.3	568.2	282.6	39.8	1.000051
48000.0	136.1	-61.4		223.9	566.8	280.2	40.4	1.000050
48500.0	132.8	-62.5		219.6	565.5	278.1	41.1	1.000049
49000.0	129.6	-63.2		215.0	564.4	276.6	41.6	1.000048
49500.0	126.4	-63.9		210.4	563.6	275.2	42.1	1.000047
50000.0	123.3	-64.5		205.9	562.7	276.0	43.2	1.000046
50500.0	120.3	-65.2		201.5	561.8	277.4	44.7	1.000045
51000.0	117.3	-65.8		197.2	560.9	278.0	45.3	1.000044
51500.0	114.4	-66.1		192.6	560.5	277.1	44.5	1.000043
52000.0	111.6	-66.3		188.0	560.3	276.3	43.6	1.000042
52500.0	108.8	-66.5		183.5	560.0	276.2	39.7	1.000041
53000.0	106.2	-66.7		179.1	559.7	276.1	35.5	1.000040
53500.0	103.5	-66.9		174.9	559.5	276.8	31.6	1.000039
54000.0	101.0	-66.9		170.5	559.5	278.7	28.1	1.000038
54500.0	98.5	-66.6		166.1	559.8	281.0	24.7	1.000037
55000.0	96.0	-66.4		161.8	560.2	282.9	22.5	1.000036
55500.0	93.7	-66.2		157.6	560.5	285.1	20.4	1.000035
56000.0	91.4	-65.9		153.6	560.8	286.7	20.7	1.000034
56500.0	89.1	-65.7		149.6	561.2	287.2	23.9	1.000033
57000.0	86.9	-65.2		145.6	561.8	287.5	27.1	1.000032
57500.0	84.8	-64.6		141.7	562.6	291.4	26.0	1.000032
58000.0	82.7	-64.1		137.8	563.3	296.2	24.6	1.000031
58500.0	80.7	-63.5		134.1	564.0	302.9	21.3	1.000030
59000.0	78.7	-63.0		130.5	564.7	319.5	14.5	1.000029
59500.0	76.8	-63.3		127.5	564.3	354.6	10.5	1.000028
60000.0	74.9	-63.6		124.6	564.0	7.9	10.1	1.000028
60500.0	73.1	-63.9		121.7	563.6	7.3	9.5	1.000027
61000.0	71.3	-64.2		118.9	563.2	6.2	8.9	1.000026
61500.0	69.6	-64.3		116.1	563.0	347.0	6.7	1.000026
62000.0	67.9	-64.0		113.1	563.4	316.8	5.8	1.000025
62500.0	66.3	-63.6		110.2	563.9	285.4	5.7	1.000025
63000.0	64.7	-63.3		107.3	564.4	250.2	5.7	1.000024
63500.0	63.1	-62.9		104.6	564.8	224.2	7.5	1.000023

STATION ALTITUDE 4010.40 FEET MSL
2 NOV. 82 0830 HRS MST
ASCENSION NO. 29

UPPER AIR DATA
3060220029
NW 30

GEODETIC COORDINATES
32.88497 LAT DEG
106.49714 LONG DEG

TABLE 14 Cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION (TN) SPEED (TN)	INDEX OF REFRACTION
64000.0	61.6	-62.6		101.9	565.3	216.6	1.000023
64500.0	60.1	-62.3		99.2	565.7	213.7	1.000022
65000.0	58.6	-61.9		96.7	566.2	211.1	1.000022
65500.0	57.2	-61.6		94.2	566.7	216.2	1.000021
66000.0	55.8	-61.2		91.8	567.1	220.9	1.000020
66500.0	54.5	-60.9		89.4	567.6	229.4	1.000020
67000.0	53.2	-60.6		87.1	568.0	246.1	1.000019
67500.0	51.9	-60.2		84.9	568.5	266.0	1.000019
68000.0	50.6	-59.9		82.7	568.9	280.3	1.000018
68500.0	49.4	-59.7		80.6	569.2	300.7	1.000018
69000.0	48.2	-59.6		78.6	569.4	327.0	1.000018
69500.0	47.1	-59.5		76.7	569.5	337.3	1.000017
70000.0	45.9	-59.4		74.9	569.6	358.5	1.000017
70500.0	44.8	-59.3		73.1	569.7	37.9	1.000016
71000.0	43.8	-59.2		71.3	569.8	298.9	1.000016
71500.0	42.7	-59.1		69.6	569.9	285.8	1.000015
72000.0	41.7	-59.0		67.9	570.1	282.2	1.000015
72500.0	40.7	-58.7		66.1	570.6	270.0	1.000015
73000.0	39.8	-58.2		64.4	571.2	270.5	1.000014
73500.0	38.8	-57.7		62.8	571.9	288.3	1.000014
74000.0	37.9	-57.2		61.1	572.5	264.7	1.000014
74500.0	37.0	-56.7		59.6	573.1	264.1	1.000013
75000.0	36.1	-56.2		58.0	573.8	263.4	1.000013
75500.0	35.3	-55.8		56.5	574.4	265.2	1.000013
76000.0	34.5	-55.6		55.2	574.6	270.6	1.000012
76500.0	33.6	-55.4		53.8	574.9	276.7	1.000012
77000.0	32.9	-55.2		52.5	575.1	282.1	1.000012
77500.0	32.1	-55.0		51.2	575.4	284.9	1.000011
78000.0	31.3	-54.8		50.0	575.6	288.1	1.000011
78500.0	30.6	-54.7		48.8	575.9	291.0	1.000011
79000.0	29.9	-54.5		47.6	576.1	288.0	1.000011
79500.0	29.2	-54.3		46.5	576.3	284.9	1.000010
80000.0	28.5	-54.1		45.4	576.5	281.5	1.000010
80500.0	27.9	-54.0		44.3	576.8	275.3	1.000010
81000.0	27.2	-53.8		43.2	577.0	267.5	1.000010
81500.0	26.6	-53.6		42.2	577.2	257.9	1.000009
82000.0	26.0	-53.5		41.2	577.4	252.5	1.000009
82500.0	25.4	-53.3		40.2	577.6	248.1	1.000009
83000.0	24.8	-53.1		39.2	577.9	243.1	1.000009
83500.0	24.2	-53.0		38.3	578.1	235.7	1.000009

STATION ALTITUDE 4010.40 FEET MSL
2 NOV. 62 0830 HRS MST
ASCENSION NO. 29

UPPER AIR DATA
3060220029
NW 30

GEODETIC COORDINATES
32.88497 LAT DEG
106.49714 LON DEG

TABLE 14 Cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES (TH)	SPEED KNOTS	
84000.0	23.6	-52.8		37.4	578.3	228.6	6.4	1.000008
84500.0	23.1	-52.6		36.5	578.5	223.8	7.4	1.000008
85000.0	22.6	-52.5		35.6	578.7	219.5	7.8	1.000008
85500.0	22.0	-52.3		34.8	579.0	214.1	7.2	1.000008
86000.0	21.5	-52.1		33.9	579.2	207.8	6.8	1.000008
86500.0	21.0	-52.0		33.1	579.4	206.5	6.2	1.000007
87000.0	20.5	-51.8		32.3	579.6	216.0	5.4	1.000007
87500.0	20.1	-51.6		31.6	579.8	228.2	4.8	1.000007
88000.0	19.6	-51.6		30.8	579.9	245.0	6.2	1.000007
88500.0	19.2	-51.6		30.1	579.9	254.2	10.5	1.000007
89000.0	18.7	-51.5		29.4	579.9	258.0	14.9	1.000007
89500.0	18.3	-51.5		28.7	580.0	259.9	17.1	1.000006
90000.0	17.9	-51.5		28.1	580.0	261.7	15.3	1.000006
90500.0	17.5	-51.5		27.4	580.0	263.8	13.6	1.000006
91000.0	17.1	-51.5		26.8	580.0			1.000006
91500.0	16.7	-51.4		26.2	580.1			1.000006
92000.0	16.3	-51.4		25.6	580.1			1.000006
92500.0	15.9	-51.4		25.0	580.1			1.000006

STATION ALTITUDE 4010.40 FEET MSL
2 NOV. 82 0830 HRS MST
ASCENSION NO. 29

MANDATORY LEVELS
3060220029
NW 30

GEODETTIC COORDINATES
32.88497 LAT DEG
106.49714 LON DEG

TABLE 15

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE		DIRECTION DEGREES (TN)	SPEED KNOTS
850.0	4916.	10.7	-4.9	33.	20.0	12.0
800.0	6566.	8.3	-6.5	34.	13.0	14.3
750.0	8306.	5.3	-7.2	40.	54.5	7.1
700.0	10141.	1.1	-6.9	55.	188.0	4.6
650.0	12082.	-3.6	-10.0	61.	239.9	10.2
600.0	14137.	-9.0	-11.8	80.	204.9	17.6
550.0	16332.	-13.3	-23.9	40.	257.4	27.7
500.0	18686.	-19.2	-26.7	51.	259.0	27.8
450.0	21225.	-25.9	-28.1	82.	260.4	33.5
400.0	23989.	-32.6	-35.6	74.	264.4	30.7
350.0	27064.	-33.9	-47.8	23.	285.8	44.7
300.0	30594.	-35.0	-49.1	22.	286.9	52.7
250.0	34765.	-36.7	-50.5	22.	287.0	65.6
200.0	39743.	-44.7			283.0	56.2
175.0	42627.	-51.3			287.6	51.7
150.0	45871.	-57.3			285.6	36.9
125.0	49587.	-64.2			275.1	42.4
100.0	54027.	-66.8			279.4	27.0
80.0	58482.	-63.3			306.6	19.2
70.0	61170.	-64.4			353.9	7.3
60.0	64279.	-62.2			213.8	8.1
50.0	67996.	-59.7			288.1	5.1
40.0	72583.	-58.3			272.1	17.1
30.0	78588.	-54.5			288.7	8.8
25.0	82430.	-53.2			245.6	5.2
20.0	87164.	-51.6			229.0	4.8